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## ZOOLOGY.

**Lygosoma (Liolepisma) Laterale in New Jersey**—As this species (the *Oligosoma laterale* of Girard and authors) is mainly characteristic of the South Atlantic and Gulf States—the Austroriparian Region in brief—its occurrence in New Jersey under such circumstances as to lead one to believe it a regular member of the fauna is of interest as an additional fact showing the strong southern stamp which the fauna and flora of that interesting region bear.

Yarrow's check-list, and most published lists since, record Salem, N. C., as the most northerly locality in the eastern United States, while southern Illinois and Indiana mark the northernmost limit of distribution in the Mississippi valley. Prof. Cope, however, informs me of a record for Maryland.

The New Jersey record is based upon a single specimen taken near Batsto, in Burlington County, on May 29th, of the present year. It was found on the ground concealed beneath a wood pile on a deserted farm, and glided away so quietly, clinging so closely to the ground and so skillfully seeking concealment beneath every small plant and chip, that it almost escaped unperceived.

It remained an interesting captive for about one month, but finally succumbed to its appetite in attempting to dispose of a large *Polydesmus* entire. During its captivity it partook of several small specimens of *Julus*, *Polydesmus*, and pill-bugs (*Armadillo*), besides small beetles and flies, a larval grasshopper and an earth-worm (*Allurus*)—food very different from that selected by *Sceloporus undulatus* under similar circumstances.

It was very fond of water, and sipped it up eagerly when poured on the bottom of its jar; the snout was buried beneath the surface, and the slender tongue travelled out and in rapidly until the water had sunk beneath the surface of the sand.

A similar movement of the tongue took place, as in the snakes, when food was detected, or under other excitement. The body movements were exceedingly graceful, but slow, as compared with *Eumeces* or *Sceloporus*.

During the night of June 14th two eggs were laid, and were found the next morning on the surface of the sand, without any covering whatever. *Sceloporus* has a similar habit in captivity, my experience being that the eggs are only partially or not at all covered. These eggs of

Lygosoma have the usual tough parchment-like shell, with calcareous surface deposits, as in many Reptilia. They have a structure essentially similar to that described for the egg-shells of Pityophis. They are more slender in form than those of Sceloporus, and measure 9.5 x 4.5 mm. The contained embryos were somewhat younger than those of Sceloporus usually are at the time of disposition—that is, the allantoic outgrowth was but just visible. The fertility of this specimen renders it probable that the species is a regular habitue of the neighborhood, but its small size, and retiring and nocturnal habits, render it very likely to escape notice.—J. PERCY MOORE.

**On a New Glauconia from New Mexico.**—Nasal entirely divided, rostral rounded behind, reaching the line of the eyes. Two labials anterior to the ocular, the posterior reaching the eye. Frontal and supraorbital scales smaller than those posterior to them. The eye is close to the nasal, and distant from the supraocular. Postocular reaching last labial, and bounded posteriorly by three sublingual scales. Inferior labials five, the second twice as large as any of the others; the fourth barely reaching the commissure of the mouth, and the fifth very small. Scales in fourteen rows. A large preanal plate. Tail flattened below, entering total length about fifteen times.

Color very light brown above, whitish below. Total length 235 mm.; tail 12 mm.

I found the specimen above described in a road at the silver mines at Lake Valley, southern New Mexico.

The appearance of this species is so similar to that of the *G. dulcis* that I originally identified it with the latter. It is, however, very different, especially in the number of labials, and the scales which adjoin the postocular posteriorly. There is no plate comparable to the so-called parietal of *G. dulcis*. I propose that it be called *G. dissecta*.—E. D. COPE.

**On the Habits of Keen's Deer Mouse, Peromyscus keeni (Rhoads).**—The following interesting notes were forwarded me by the Rev. J. H. Keen, a missionary on the Queen Charlotte Islands. The Deer Mouse referred to was originally described in the Proceedings of the Academy of Natural Sciences for 1894, from specimens procured by Mr. Keen, and forwarded to Philadelphia. The remarks on the use of the cheek pouches for the conveyance of food are of particular value. It has been known for many years that several species of this genus possessed cheek pouches; but I can remember no personal observation of their use by the living animal, having been published.—SAMUEL N. RHOADS.

Acad. Nat. Sci., Phila., July 16, 1896.

MASSETT, QUEEN CHARLOTTE ISLANDS,  
BRITISH COLUMBIA, February 22, 1896.

*Samuel N. Rhoads, Esq., Philadelphia, Dear Sir:*—The following notes I have made lately on the character of *Sitomys keenii* may be of interest. Use them as you think best.

*Sitomys keenii* is the common house mouse here, and specimens are very numerous. I recently confined an adult female in a fairly spacious cage with glass front, I subsequently introduced three other nearly adult specimens. At first the old female resented the intrusion, but soon became reconciled. The younger ones may have been her offspring, having been taken in the same place. On two other occasions I introduced an adult male taken in another locality, whereupon the old female in each case attacked the intruder fiercely, chased him all over the cage till he was exhausted, and then flew at his throat and bit him so severely that he died almost immediately. A shrew introduced later she treated in the same manner.

After a couple of days they became reconciled to confinement, and indifferent to being watched whilst feeding or at play. They ate bread moistened with milk and raw potatoes, but showed a marked preference for wheat. The wheat they never ate on the spot, but filled their pouches with it, and ascending a sloping board deposited it in their sleeping place. This they did with great rapidity, and a handful soon disappeared. The average number of corns taken at one mouthful was ten, but once or twice the old mouse took as many as sixteen. The first few corns they took up with their mouths, but used their feet to cram in the rest. When their pouches were full their heads were twice their normal size, and their expression extremely droll.

The storing propensity is evidently very strong. It is quite a common occurrence to find any empty article, which has been unused for a few days, half full of rice or corn when next taken up. Boots and shoes seem to be the favorite storing places; but a neighbor of mine, on visiting his outhouse, found the oven of a disused stove half full of rice, which had been obtained from sacks close by.

When in a trap, frightened, these mice sound an alarm by suddenly contracting the nails of the fore-foot so as to cause a sharp scratch on the floor. This they repeat several times, using sometimes one fore-foot, sometimes the other, but never the hind-feet.

*Sitomys keenii* is the only mouse here; *Mus musculus*, though on the opposite mainland, not having yet found its way thus far. In the summer of 1894 *S. keenii* was unusually numerous. An Indian crossing to

the mainland observed one in his canoe when in mid-ocean, and on reaching mainland saw it jump ashore and escape.

Yours faithfully, J. H. KEEN.

**The Inheritance of an Acquired Character.**—*Editor American Naturalist*: It has been my fortune recently to have brought to my notice an instance illustrating Darwin's theory of the origin of species, that seems to me noteworthy.

A certain Mr. J. B. Perry, a resident of Cleveland, is the owner of a very fine female fox-terrier, which has recently given birth to a litter of seven puppies, five of whom are remarkable from the fact that they were *born with short tails*.

These five were male puppies, while the two with tails of ordinary length are female.

Of the five short-tailed dogs one has almost no tail at all, it being but a little stump not over half an inch long.

When I examined them they were just two weeks old and barely had their eyes open. The tails of the females had been recently cut, and the scar on the stump was plainly perceptible, while the ends of the five short tails were entirely grown over with hair, and plainly were born in the condition I found them. Their length was about half the ordinary length, or about what is considered the "proper thing" by dog-fanciers, except in the case of the one already mentioned as having almost no tail at all.

When it is remembered that the custom of cutting off over half of the caudal appendage of the fox-terrier has prevailed for many generations back in the ancestry of a thoroughbred, the birth of short-tailed dogs is not to be wondered at. Yet this instance is so striking that it seems worthy of being brought to the notice of the readers of the AMERICAN NATURALIST.—NORMAN E. HILLS.

**The Hartebeest (*Alcelaphus*).**—This large genus, despite its number of species, is sharply defined, and though at first sight the caama and tsessebe, bontebok and Hunter's hartebeest, seem very indifferent, yet they possess horns of such a characteristic type, have features and habits so much in common, that it seems a useless multiplication of names to separate this genus into subgenera.

Although to us the caama is the best known species, at once arresting our attention by its ugliness, yet the earliest known kind was the bubaline hartebeest of the north, the bukyel wash, as the Arabs call it. For, on the Egyptian monuments there often appears the figure of an ox with unmistakable hartebeest horns, harnessed to the chariots of the

kings ; and, since all the hartebeests can be readily domesticated when caught young, we conclude that in the days of the Pharoahs they actually broke in the hartebeests as beasts of draught. The Dutch name implies stag-ox, so that the old settlers may have done the same, unless the Zulus brought the Arabic name down with them, and it was then translated by the Boers into equivalent Dutch.

The Caama or true South African hartebeest is, as Cornwallis Harris remarks, made of triangles. The male stands five feet at the withers, and nine in extreme length. The crupper is drooping and the shoulder elevated ; the head heavy, narrow, long. The horns are seated on the summit of a beetling ridge of bone on the forehead, almost touching at the base, thick, diverging and again approaching, turned forwards and then acutely backwards, with points directed horizontally to the rear. The surface of the horns is embossed with five or six prominent knots on the front only. The neck and throat are bare, with no mane. The coat is short and glossy ; color, bright orange-sienna with a crimson cast. There is a black patch at the base of the horns above the forehead, continued behind, and terminating in front of the ear. A black streak down the nose, and a black stripe down the ridge of the neck. Chin black. A black line down the front of each leg, terminating in an angular band above the fetlock. Tail reaching to the hocks, with backwardly directed glossy black hair. Legs slender with taper hoofs. Ears whitish, long, pointed and flexible. A half-muzzle dividing the nostrils ; nose flattened, moist. Eyes high in the head, wild, and of a fiery-red color. Female with more slender horns, and fainter in color. Two mammæ. Young born singly in April and September.

The hartebeest is found in small flocks, headed by three or four stout males, the weaker being expelled and forced to establish a community of their own. In fighting they drop down on their knees, and, placing their forehead parallel with the ground by putting their nose between their legs, butt each other with intense fury, their gnarled and angular horns interlocking, and inflicting gaping, jagged wounds. A common habit is to rake their horns against the trees until they are covered with bark.

In running the caama has long, *oily*, and beautiful paces, which are of the most approved racing style. Moving at a smooth and swinging canter, throwing its hind quarters well under the body, brandishing the glossy tail, and carrying its great beamy head in the best possible manner, it cuts a very majestic appearance, notwithstanding its angular build. So swift of flight is it that the hunter is again and again disappointed when trying to chase it on horseback ; but in and around

Vryburg, and near to the farms in Bechuanaland, it has become so used to the sight of man who protects it, that it no longer regards him as an enemy. Sir C. Harris, however, saw him in a more unsophisticated state, for, he says that, when followed, the caama frequently stops, and turning proudly towards the foe with a most sapient look, sneezes with great violence, an act of overt folly, so much so, indeed, that it would appear to be playing a game of hide-and-seek with the hunter, ever peeping at him from behind the trees.

The flesh is dark and venison-like in appearance, but somewhat tasteless. The skin is in much request among the Bechuanas for karosses.

The caama is very liable to a terrible scourge that affects most of the big game of South Africa. It originates in a kind of bots, probably the larvæ of an *Oestrus*, which force their way into the nostrils, and the head becomes literally crammed with maggots, numbers of which are expelled in the process of sneezing.

The bontebok and blesbok bear to each other the closest resemblance, being equally robust, with the same hump on the back just behind the neck, the same broad nose, characteristic indeed of the whole Alcelaphine division, and finding its greatest expression in the wildebeests; and, as Harris says, both have the same fine, venerable, old-goatish cast of countenance. The lyrated horns are placed vertically on the summit of the cranium, those of the bontebok being jet black, whereas they are light brown in the blesbok. They have in common the snowy white blase on the nose; the belly is white; and the back hoary and glazed, as though they wore saddles. They are equally addicted to the use of salt, which occurs abundantly in the form of an efflorescence in the Kalahari, and both scour against the wind with their square noses close to the ground, as though they were running scent. The bontebok now survives only on certain farms near Cape Agulhas, but the blesbok has a more northerly range, and formerly existed in great numbers in the Free State and Transvaal.

In the country of the Tamboukies, immediately beyond the eastern frontier of Albany, there exist boundless billowy successions of surge-like undulations, known appropriately as the Bontebok flats; whether the "painted-goat" ever existed there is problematical, but the blesbok used to be shot there in considerable numbers. These two bucks stand out from the rest of the hartebeests by their violet and chocolate coloring; their height is about 3 feet 8 inches, and length 6 feet 4 inches, but animals of this stature are seldom found now.

The sassayby, or, as Livingstone called it, the tsessebe, is found north of Lake Ngami. It stands 4 feet 6 inches at the withers, and some 8

feet 3 inches in length. Horns robust, turning outwards, forming a complete crescent when looked at from before; some 12 or 15 annuli on the lower half, upper half smooth; the characteristic hartebeest zigzag is only faintly reproduced. Selous has noted a hybrid between the tsessebe and the caama. Herr Matchie's *Damalis jimeru* is not clearly separated from the tsessebe. The most characteristic feature of this species is the slate-colored markings on the sides of the shoulders and flanks, while the general color is brown, fulvous or tawny.

Of the North African forms we can only mention here Hunter's hartebeest, which has a much shorter face than the typical caama. It stands some 4 feet at the withers, and is of a uniform chestnut brown, with white tail and belly. A white chevron stretches between the eyes. The horns are inclined outwards at the base, and then run vertically upwards, the greater part being quite smooth; length round curve, 26½ inches. (The Scientific African, February, 1896.)

**Zoological News.**—The material obtained by deep-sea dredging in the gulf off the coast of Cape Breton includes many animals hitherto considered as exclusively Mediterranean as to habitat. In view of the importance of this discovery, M. De Folin (de Biarritz) has prepared a catalogue of the species found in the collections, the first installment of which is published in the *Revue des Sciences Nat. de l'ouest*, April, 1896.

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## ENTOMOLOGY.<sup>1</sup>

**Fossil Cockroaches.**—Mr. S. H. Scudder's studies of the American Fossil Cockroaches have recently been published by the U. S. Geological Survey (Bulletin 124). Most of the forms figured and described are from the paleozoic fauna. While, in 1879, only seventeen species of cockroaches belonging to this fauna were known, there are 132 species now described.

**Dr. Packard's Monograph of Bombycine Moths.**—In the important memoir recently published by the National Academy of Sciences, Dr. A. S. Packard embodies the results of many years work upon the Bombyces. The volume contains about 300 quarto pages and 50 plates, many of the latter being beautifully colored. The scope

<sup>1</sup> Edited by Clarence M. Weed, New Hampshire College, Durham, N. H.